

Putting it together in the resus room

ARREST

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Critical Care Ultrasound Course

Formulate the question

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Why is the patient arrested: is there a reversible cause?

Is there a reversible cause?

Tension PTX

Tamponade

Toxins

Thrombosis (MI)

Thromboembolism (PE)

Hypovolaemia

Hypothermia

Hypoglycaemia

Hyperkalaemia

Hydrogen (acidosis)

Is there a reversible cause?

Tension PTX

Tamponade

Toxins

Thrombosis (MI)

Thromboembolism (PE)

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Hyperkalaemia

Hydrogen (acidosis)

Perform the scan

Curved or sector probe

Abdo or cardiac preset

Whatever you're using is fine

A 3-step scan

1. Single view heart
2. Anterior lung fields (1 point each side)
3. At your discretion:
 - IVC (hypovolaemia)
 - Abdo (eg AAA / free fluid in trauma)
 - **Or finish scanning**

Today...

Just the heart

Don't get in the way of CPR

You need to scan during the pulse check

You have ten seconds!

CPR

Scan/save heart image

CPR & discuss images

Scan/ save lung images

CPR & discuss images



Single view of heart

What am I looking for?

Is there a heartbeat?

Pericardial effusion?

$RV > LV$?

Probe position

Subcostal window is easiest
But any window will do

Possible outcomes



Pen TH
S MB

Cr
P21



MI
1.0

19

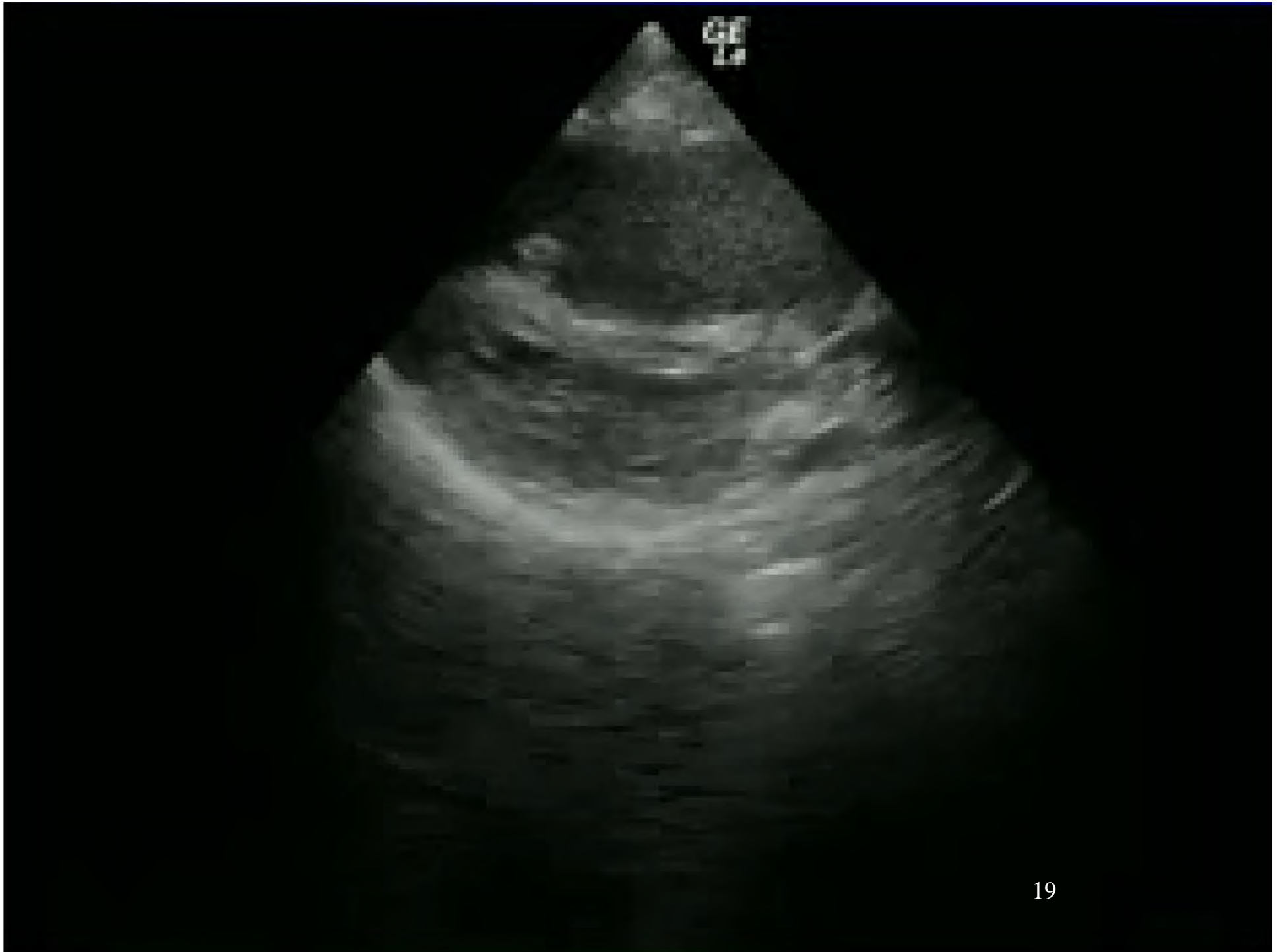
What did you see?

What will you do?

Active heart = PEA

Hypovolaemia?

Action: replace volume
Continue CPR
Find & treat cause



Big RV

squashing LV
It's a PE

Caveats:

- Is it chronic? Thickened RV wall
 - Is it dilated? Intra arrest

Action: consider thrombolysis
If in doubt, consider 3-point DVT scan



Pericardial fluid

It's a tamponade

Caveat: it might be an incidental finding

What if you're wrong?

What have you got to lose?

Action: pericardiocentesis

GE
Le



5
10
15

Cardiac standstill

Exclude other reversible causes (Hs, Ts)

Action: cease CPR

Inadequate view

Options:

Try another window

Try cardiac probe

Try step 2

Get help

Single view heart

